

TABLE OF CONTENTS

TABLE OF CONTENTS	1
1- INTRODUCTION	2
2- NOISE-ONLY TEST PROCEDURE	2
2-1 Overview.....	2
2-2 Phantom Positioning	2
2-2-1 Head Coil Phantom Positioning.....	2
2-2-2 Body Coil Phantom Positioning	4
2-3 Invoking Noise-Only Test	5
3- VIEWING TEST RESULTS	7
4- TROUBLESHOOTING	9
4-1 When to Reboot	9
REVISION HISTORY	10

1- INTRODUCTION

Note

This test is available beginning with Release 8.4 ACGD and Release ASP2.

The Noise-Only Test provides a means of quickly determining whether or not a signal-to-noise (SNR) problem is due to high noise.

The only parameter evaluated by Noise-Only Test is the system noise. The RMS noise value reported by the test is taken from the analysis of the raw data (not image data). This leaves the result unaffected by rational scaling and other effects applied to images, making it possible to generate pass/fail criteria for the test. The Noise-Only Test reads the contents of the CoilConfig.cfg file, and will work with any coil. The pass/fail criteria, however, only applies to testing of the head and body coil.

The test can be run in two display modes. The default is image mode, which facilitates viewing of coherent bands or zippers that can drive noise levels higher. It also can display the results in the Raw Data mode, which can be used to check for the presence of spike noise or white pixels in the raw data.




Note

The analysis is always performed on the raw data.

2- NOISE-ONLY TEST PROCEDURE

2-1 Overview

To set up and run the Noise-Only Test, three general tasks must be completed:

- Cancel out of any previous exams. Click the  (scan) icon, then , then .
- The phantom must be positioned and a landmark must be established.
- Noise-Only Test must be invoked from the TroubleShoot menu in the Service Desktop Manager.

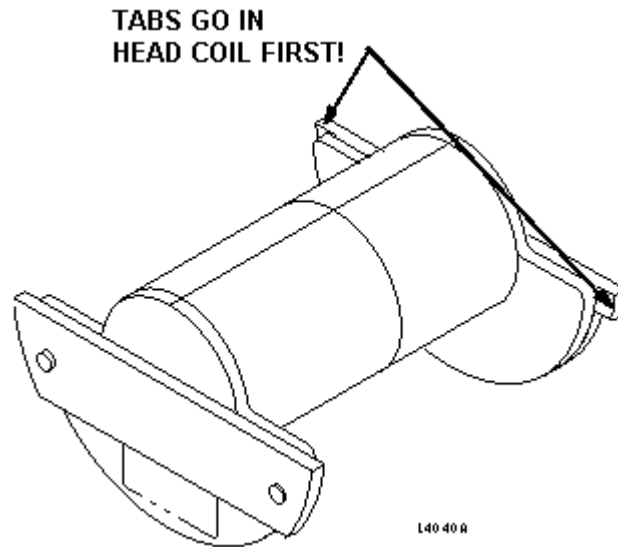
2-2 Phantom Positioning

Perform section 2-2-1 if you are running the head coil test. Perform section 2-2-2 if you are running the body coil test. Proceed to section 2-3 after positioning the phantom.

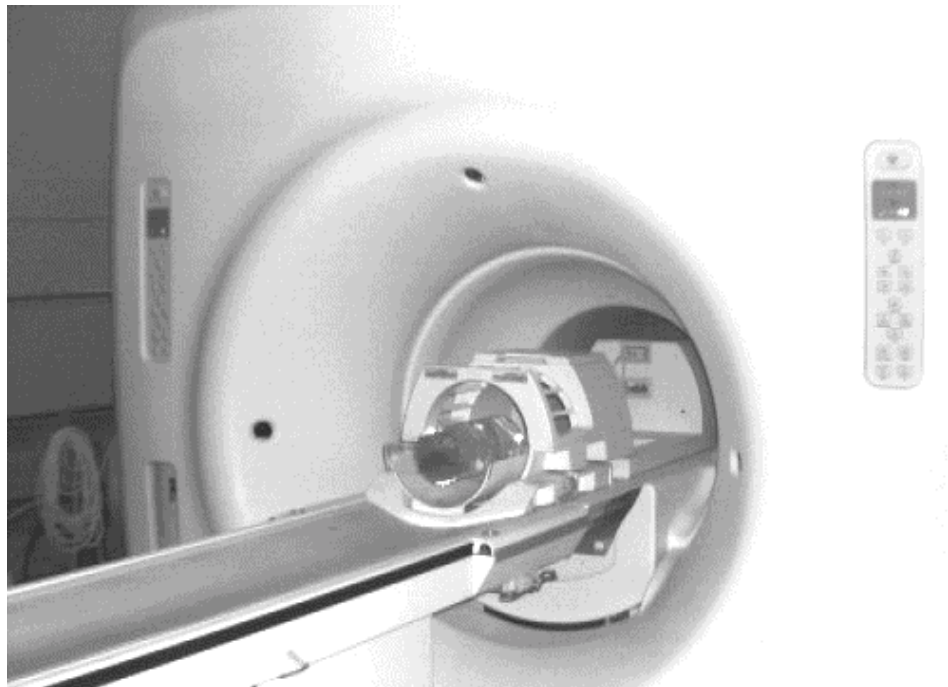
2-2-1 Head Coil Phantom Positioning

1. Place the head coil on the patient table.

2. The DQA-III phantom fits in the head coil only one way. Notice the small tabs on one end of the flange of the DQA-III phantom. These tabs go in the head coil first (see Illustration 2-1). Place the DQA-III phantom in the head coil on the patient table (see Illustration 2-2).

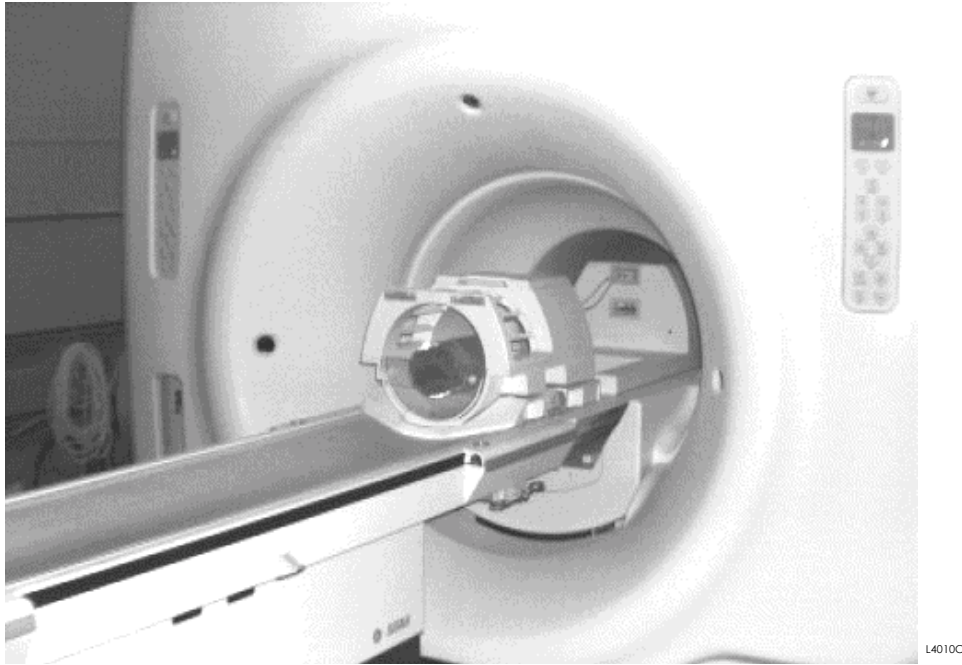


DQA-III PHANTOM ORIENTATION
ILLUSTRATION 2-1



DQA-III PHANTOM POSITION IN THE HEAD COIL
ILLUSTRATION 2-2

3. Pull the head coil all the way out to cover the DQA-III phantom as shown in Illustration 2-3.

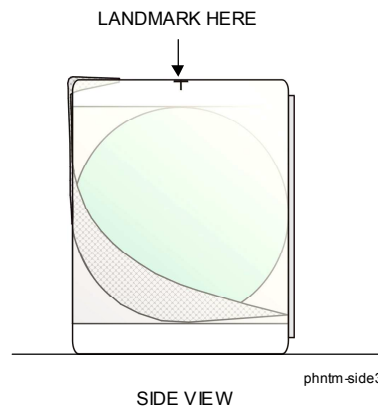


HEAD COIL AND DQA-III PHANTOM CORRECTLY POSITIONED
ILLUSTRATION 2-3

4. Landmark on the axial line of the DQA-III phantom in the head coil.

2-2-2 Body Coil Phantom Positioning

1. Place the short body loader and sphere on the patient table. See illustration 2-4.

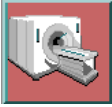




SHORT BODY LOADER AND SPHERE SETUP
ILLUSTRATION 2-4

2. Landmark on the center of the short-body loader.


2-3 Test Execution

2-3-1 Noise-Only Test Setup



1. Click the  (scan) icon to go to the scan page.
2. If necessary, click , then click  to cancel any previous exam.



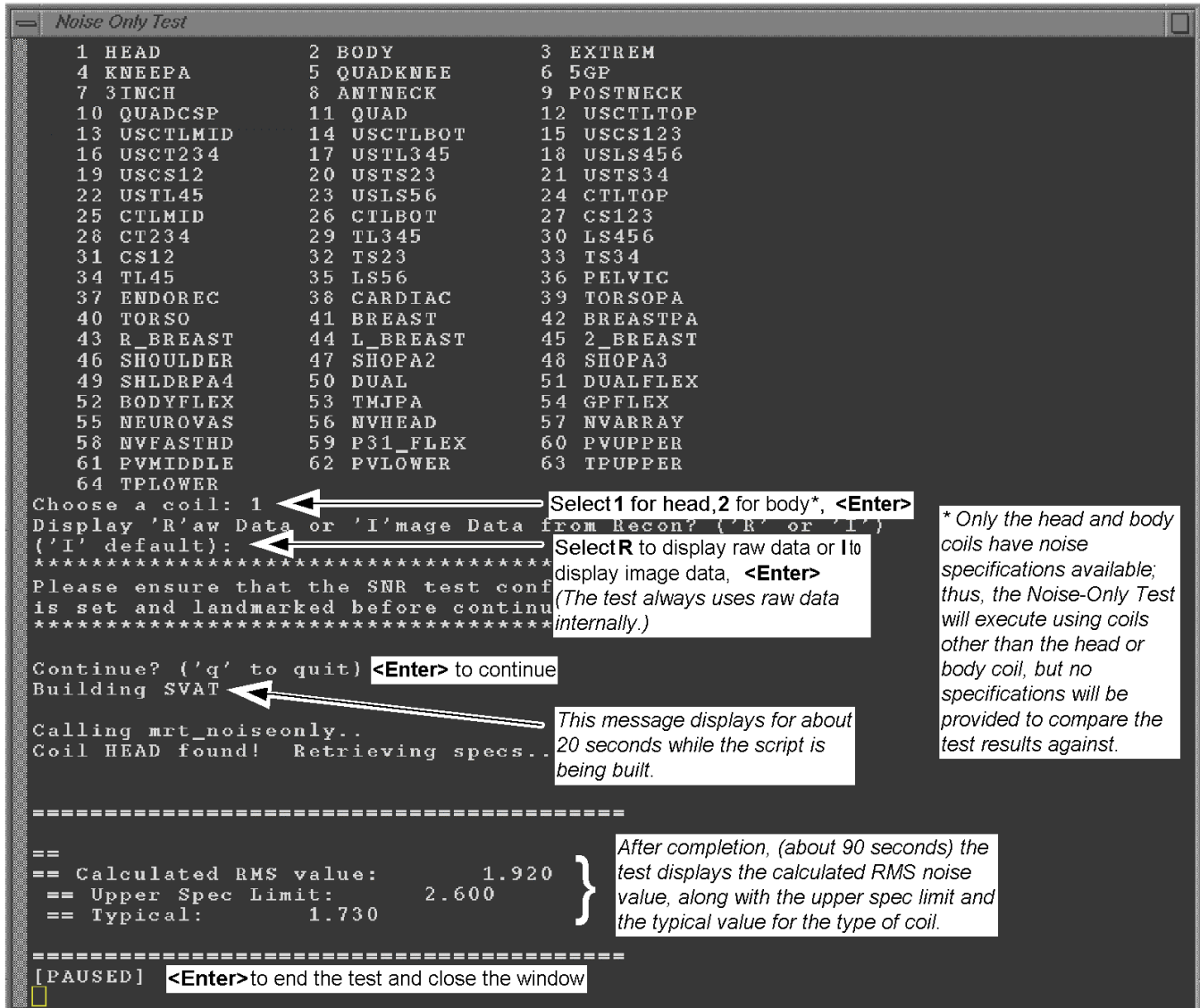
Test functionality and system functionality may be adversely affected if the previous exam is not terminated.

3. Click on .
4. Enter **geservice** under Patient ID.
5. Enter **111** under Weight

2-3-2 Noise-Only Test Execution

1. Click the  (Service Tools) icon to open the Service Desktop Manager.
2. Click .

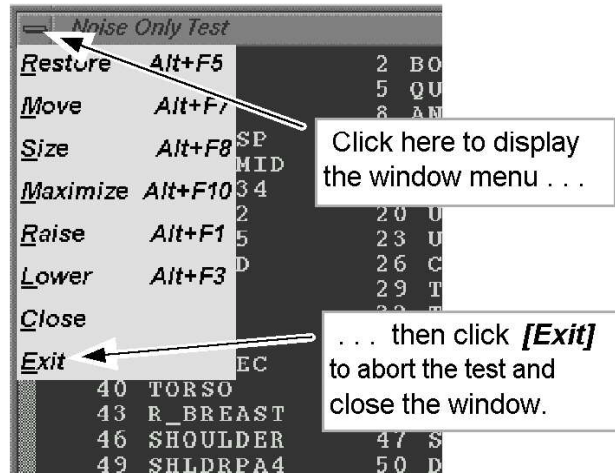
- 3. Select **Noise Only Test** from the **TroubleShoot** menu on the Service Desktop Manager, then click **Start...**. The *Noise Only Test* window opens. Follow the instructions shown in Illustration 2-5 to perform the test.



NOISE-ONLY TEST WINDOW (EXAMPLE)
ILLUSTRATION 2-5

Note

Noise-Only Test can be aborted at any time by selecting [**Exit**] from the Noise-Only Test window menu as shown in Illustration 2-6.




ABORTING THE NOISE-ONLY TEST
ILLUSTRATION 2-6


3- VIEWING TEST RESULTS

As shown in Illustration 2-5, the test results are displayed immediately after the test completes. Results can also be viewed later using the Report Manager tool as described in the following procedure.



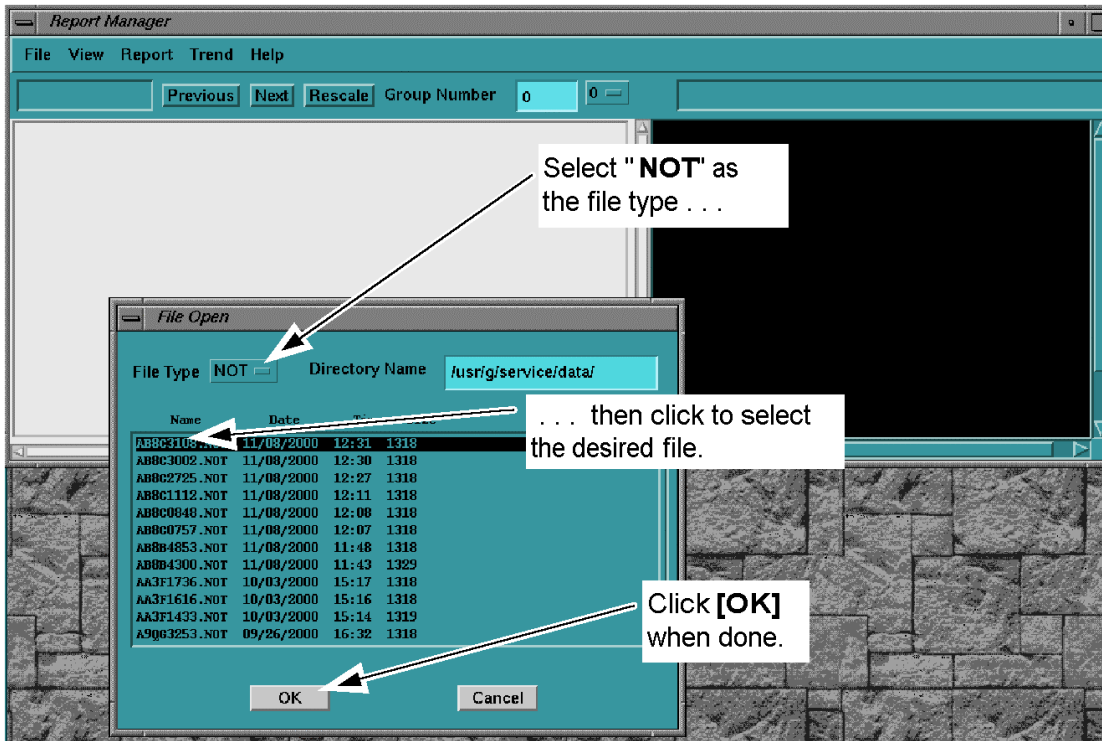
1. Click the  (Service Tools) icon to open the Service Desktop Manager.

2. Click  .

3. Select **Report Manager** from the menu, then click  .

4. The Report Manager window opens and asks for a password. Enter password **mrgo1<Enter>**.

5. From the *File* menu in the Report Manager window, click *Open*. The *File Open* window appears. Follow the instructions shown in Illustration 2-7.




REPORT MANAGER (EXAMPLE)
ILLUSTRATION 2-7

6. Select **NOT** from the File Type list. A list of NOT (Noise-Only Test) files displays. Click on the appropriate file (usually the most recent file), then click **OK** .
7. The test report for the Noise-Only Test displays. There are two groups for the noise-only test, group 0 and group 1. Group 0 contains site header information. Group 1 contains test results with specification and typical values for comparison. Click the **Next** or **Previous** buttons to view the desired group number. When done viewing test results with Report Manager, select **Quit** from the **File** menu. When prompted with "Really Quit?", click **Yes** .
8. To run the test for other coils, return to section 2-2-1 for the head coil or 2-2-2 for the body coil.

4- TROUBLESHOOTING

4-1 When to Reboot

If there is a stop-scan condition, such as a hardware error, during a run of the Noise-Only Test, it is a good idea to reboot the system. This condition may be caused by the test software being out of sync with the scan software. The only way to reliably clear this condition is to reboot. Follow these instructions:

1. Right-click on the desktop wallpaper area, and select **Service Tools** from the root menu, then select **System Shutdown**. Wait for Signa logout to complete, where a login screen appears. Or, select  from the Service Desktop Manager, then **[Restart]**. It is not necessary to perform a complete reboot from cold.
2. Restart system software by double clicking on the **signa** icon, then enter the password **adw2.0<Enter>**. Allow initialization to fully complete before any user interaction.
3. Continue with the Noise-Only Test.

REVISION HISTORY

REV	DATE	AUTHOR	PRIMARY REASONS FOR CHANGE
0	Jan 19,2001	M. Jones	Initial release of procedure